

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 4-8, 13-17, 20-24, 29-32 and 39-40 are pending, with claims 1 and 17 amended by the present amendment. Claims 1 and 17 are independent.

In the Official Action, claims 1, 4-8, 13-17, 20-24, 29-32 and 39-40 were rejected under 35 U.S.C. § 103(a) as being obvious in view of Chen (U.S. Patent Pub. No. 2003/0005161), Sato (U.S. Patent No. 5,884,004), Choi (U.S. Patent Pub. No. 2003/0236905) and Lear (U.S. Patent Pub. No. 2003/0099202).

Claims 1 and 17 are amended to more clearly describe and distinctly claim Applicant's invention. Support for this amendment is found in Applicant's originally filed specification. No new matter is added.

Briefly recapitulating, claim 1 is directed to:

A method of reproducing, by a content reproducing device, content information stored on a recording medium, the method comprising:

reproducing *a first stream of data read out from the recording medium* in synchronization with *a second stream of data received from a content providing server over a network based on a first command sent from the content reproducing device to the content providing server*, the first stream of data comprising audio/video data and the second stream of data comprising content data associated with the first stream of data;

sensing a failure in receiving the second stream of data; and

upon sensing the failure, re-synchronizing the first stream of data with the second stream of data based on information for synchronization or re-synchronization included in the second stream of data, thereby *simultaneously and synchronously reproducing the first stream of data together with the second stream of data, the information including data rate information of the second stream of data and/or size information of the second stream of data.*

Chen describes a method for recovering from a failed synchronization session between a computing device (e.g., a personal computer or PDA) and a server. FIG. 4 of Chen is a graphical representation of one embodiment of client synchronization data 323 exchanged during a synchronization session. Here, the synchronization data 323 includes a client request 324 and a client response 326. The client request 324 includes a sync key 402 and a client manifest 404.

The synchronization application 342 uses a synchronization state table 344 for synchronization and to perform incremental updates to the mobile device 320 to resynchronize the mobile data 322 and the server data 312 after a failed synchronization session without re-transmitting the entire server data 312 to the mobile device 320.

The client manifest 404 identifies information that has changed in the mobile data 322 since the last successful synchronization session or may identify information that the mobile device 320 wants from the server data 312. For example, in one embodiment, if the client manifest 404 is null, the synchronization application 342 sends all the currently stored server data 312 to the mobile device 320 to store as mobile data 322.

FIG. 5 of Chen is a graphical representation of server synchronization data 350 exchanged between the synchronization application 342 and the information server 310 during a synchronization session. Once a client request 324 for synchronization is received, the synchronization application 342 sends a server sync request 353 to the information server 310. The server sync request 353 includes a watermark 505 and an incremental update 506. The watermark 505 identifies the last successful synchronization transaction so that the information server 310 knows which new data must be sent. The incremental update 506 corresponds to changes that were made from the synchronization application 342 to the information server 310 since the last synchronization session.

However, as acknowledged in the Official Action, Chen does not disclose or suggest Applicant's claimed first and second streams of data. Indeed, neither the word "stream" nor synonyms for streams are present in Chen. Accordingly, Chen does not disclose or suggest re-synchronizing a first stream of data [from a recording medium] with a second stream of data [from a server]. The concept of "resynchronizing" is only used once in Chen ("...the synchronization application 342 can perform incremental updates to the mobile device 320 to resynchronize the mobile data 322 and the server data 312 after a failed synchronization session without re-transmitting the entire server data 312 to the mobile device 320.) However, Chen does not describe that mobile data 322 is a data stream. In fact, Chen describes mobile data 322 as being a mobile data store maintained in a non-volatile storage 268. Chen further describes mobile data 322 (and the server data 312) as being e-mail or other messages used by an e-mail application, contact information used by a PIM, appointment information used by a scheduling program, and the like. Indeed, Chen only describes that once the server data 312 is changed, the mobile data 322 and server data 312 are no longer identical (i.e., data is not synchronized). In order for the mobile data 322 and the server data 312 to become identical (i.e., synchronized), typically, the mobile device 320 initiates a synchronization session. Thus, Chen only resynchronizes databases or other data that is not stream data.

Sato describes a bit stream generating method for generating a bit stream containing a plurality of video objects (VOB) including video data and audio data stored on an optical disc (M). Sato describes a method and apparatus enabling seamless data reproduction using an optical disk having a data structure whereby data is shared between plural titles to efficiently use the available optical disk space, as well as "multi-angle scene reproduction."

Sato notes that because MPEG video data is compressed with variable length coding, the data quantity in each group-of-pictures (GOP) is not constant. The video and audio decoding times also differ, and the time-base relationship between the video and audio data read from an optical disk, and the time-base relationship between the video and audio data output from the decoder, do not match. Thus, Sato provides a method for time-base synchronizing the video and audio data.

Sato further notes that when two MPEG system streams are seamlessly connected but the audio components of the two system streams are not contiguous, particularly immediately before and after the seam, it is necessary to pause the audio output to synchronize (resynchronize) the audio and video components of the system stream following the seam. To enable this resynchronization, audio reproduction stopping times 1 and 2 are declared in a DSI packet.

Choi describes a method of streaming media content from a server to at least one client. The method includes: establishing a streaming media connection between the server and the at least one client; streaming the media content from the server to the client; receiving, by the client, the streamed media content from the server; sending a reconnect request from the client to the server if the streaming is interrupted; receiving, by the server, the reconnect request from the client; re-establishing the streaming media connection with the client; and continuing with the streaming the media content and the receiving the streamed media content.

However, as acknowledged by the Official Action, Chen, Sato and Choi each fail to disclose or suggest re-synchronizing the first stream of data with the second stream of data based on information for synchronization or re-synchronization included in the second stream of data, thereby *simultaneously* reproducing the first stream of data together with the second stream of

data. To cure the acknowledged deficiencies of Chen, Sato and Choi, the Official Action applies Lear.

Lear describes a method for distribution of data to a client through a computer network. The method includes: determining an optimal delivery route from a content provider to a client; transmitting a data stream from the content provider through the network; receiving the data at an optimal node to the client; and relaying the data for delivery to the client.

In one embodiment of Lear,¹ instead of configuring each server with a different stream name for each content broadcast, a set of pre-configured channels will exist. Streaming media content is then allotted a time slot on one of these channels. Thus, multiple simultaneous events may be streamed concurrently on separate channels, or channels may be used to transmit delayed copies of the same content allowing channel selection as a form of dynamic fast forward and rewind. Furthermore, a client may be directed to locally cached content while being connected to the requested content stream. This locally cached content may include advertising or information relevant to local users only.

However, Lear does not disclose or suggest simultaneous and synchronous **reproducing** of data. In Lear, any simultaneously transmitted multiple bit streams are not simultaneously reproduced in synchronization together with content data. Thus, Lear (and the remaining references) fail to disclose or suggest Applicant's claimed feature of "simultaneously and synchronously **reproducing** the first stream of data together with the second stream of data, the information including data rate information of the second stream of data and/or size information of the second stream of data." Thus, amended claim 1 (and claim 17) patentably defines over the applied references.

¹ Lear, paragraph [0076].

As none of the cited art, individually or in combination, discloses or suggests at least the above-noted features of independent claims 1 and 17, Applicant submits the inventions defined by claims 1 and 17, and all claims depending therefrom, are not rendered obvious by the asserted references for at least the reasons stated above.

MPEP 2141 notes that prior art is not limited just to the references being applied, but includes the understanding of one of ordinary skill in the art. MPEP 2141 further notes that the prior art reference (or references when combined) need not teach or suggest all the claim limitations. However, an obviousness-type rejection must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art. MPEP 2141 goes on to list exemplary rationales that may support a conclusion of obviousness. However, Applicant submits that the Official Action and the applied references present no objective evidence that would support an obviousness-type rejection of Applicant's independent claims based on one of these exemplary rationales.

Turning now to dependent claims 6 and 22, contrary to the Official Action, Lear does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and the second stream of data is muted and not reproduced. The cited portion of Lear only relates to transmitting streams, not reproducing streams. Thus, for independent reasons, claims 6 and 22 patentably define over the applied references.

Turning now to dependent claims 7 and 23, contrary to the Official Action, Lear does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and an interpolated second stream of data is reproduced. The cited portion of Lear only relates to transmitting streams, not reproducing

streams. Thus, for independent reasons, claims 7 and 23 patentably define over the applied references.

Turning now to dependent claims 8 and 24, contrary to the Official Action, Lear does not disclose or suggest delaying a time for re-synchronization, wherein during the re-synchronization delay the first stream of data is reproduced, and a previous segment of the second stream of data is reproduced. The cited portion of Lear only relates to transmitting streams, not reproducing streams. Thus, for independent reasons, claims 8 and 24 patentably define over the applied references.

Turning now to dependent claims 13 and 29, contrary to the Official Action, Lear does not disclose or suggest a) calculating an offset value for the second stream of data to establish re-synchronization; b) sending a second command requesting transmission of the second stream of data corresponding to the calculated offset value from the content producing device to the content providing server; and c) re-synchronizing the second stream of data transmitted in response to the second command with the first stream of data read out from the recording medium. The cited portion of Lear only relates to transmitting streams, not reproducing streams. Thus, for independent reasons, claims 13-16 and 29-32 patentably define over the applied references.

Turning now to dependent claim 39, the rejection refers to Gould, which is not a basis of rejection, and appears to be a typographical error. Accordingly, a *prima facie* case of obviousness has not been made. Thus, for independent reasons, claim 39 patentably defines over the applied references.

Turning now to dependent claim 40, the cited portion of Lear only relates to transmitting streams, not reproducing streams. Accordingly, Lear does not disclose or suggest Applicant's

claimed "buffering the second stream of data prior to synchronization." Thus, for independent reasons, claim 40 patentably defines over the applied references.

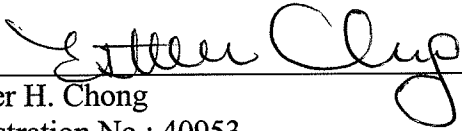
CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Michael E. Monaco, Reg. No. 52,041, at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.147; particularly, extension of time fees.

Dated: May 24, 2010

Respectfully submitted,

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